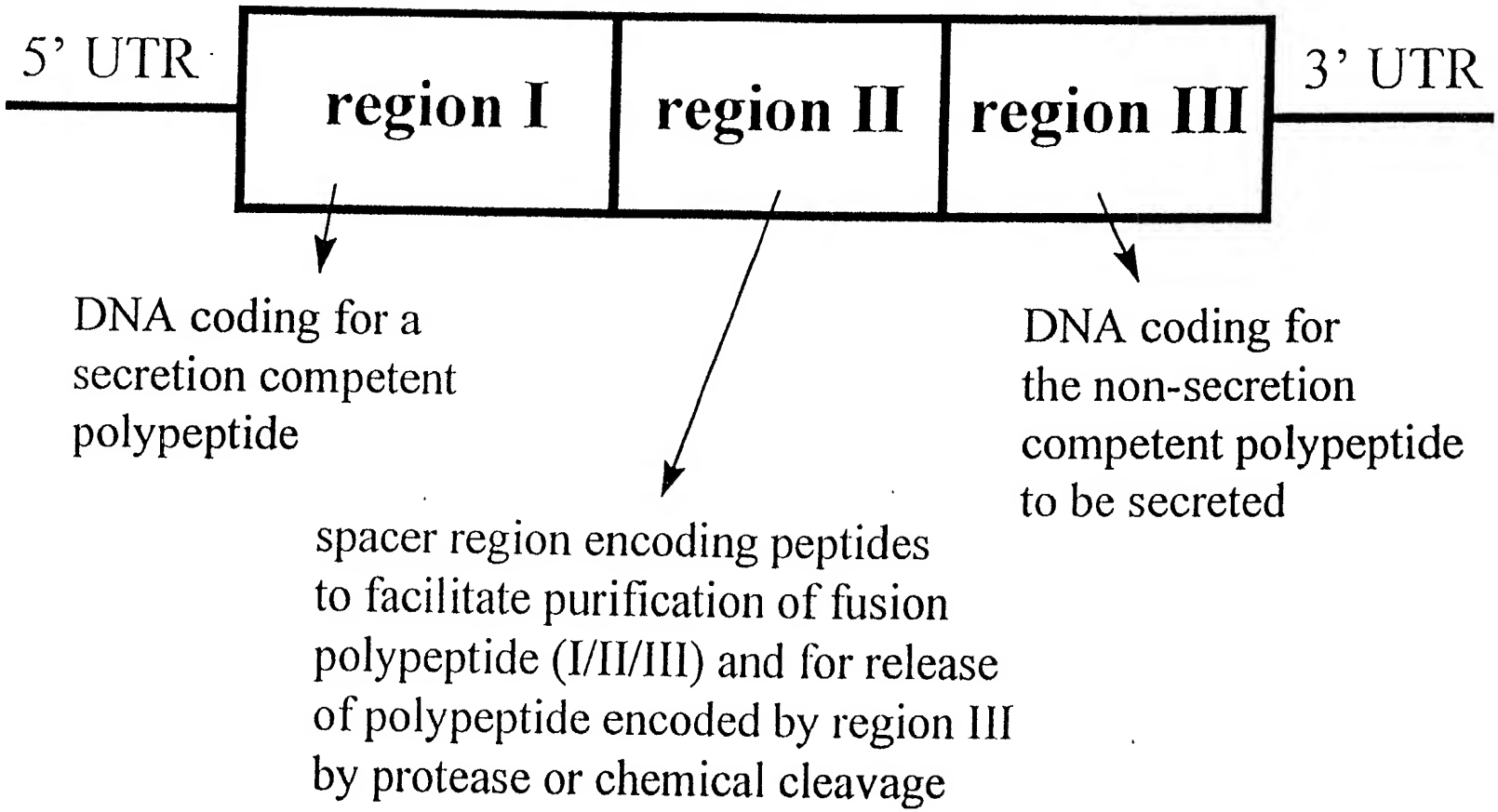


Figure 1.

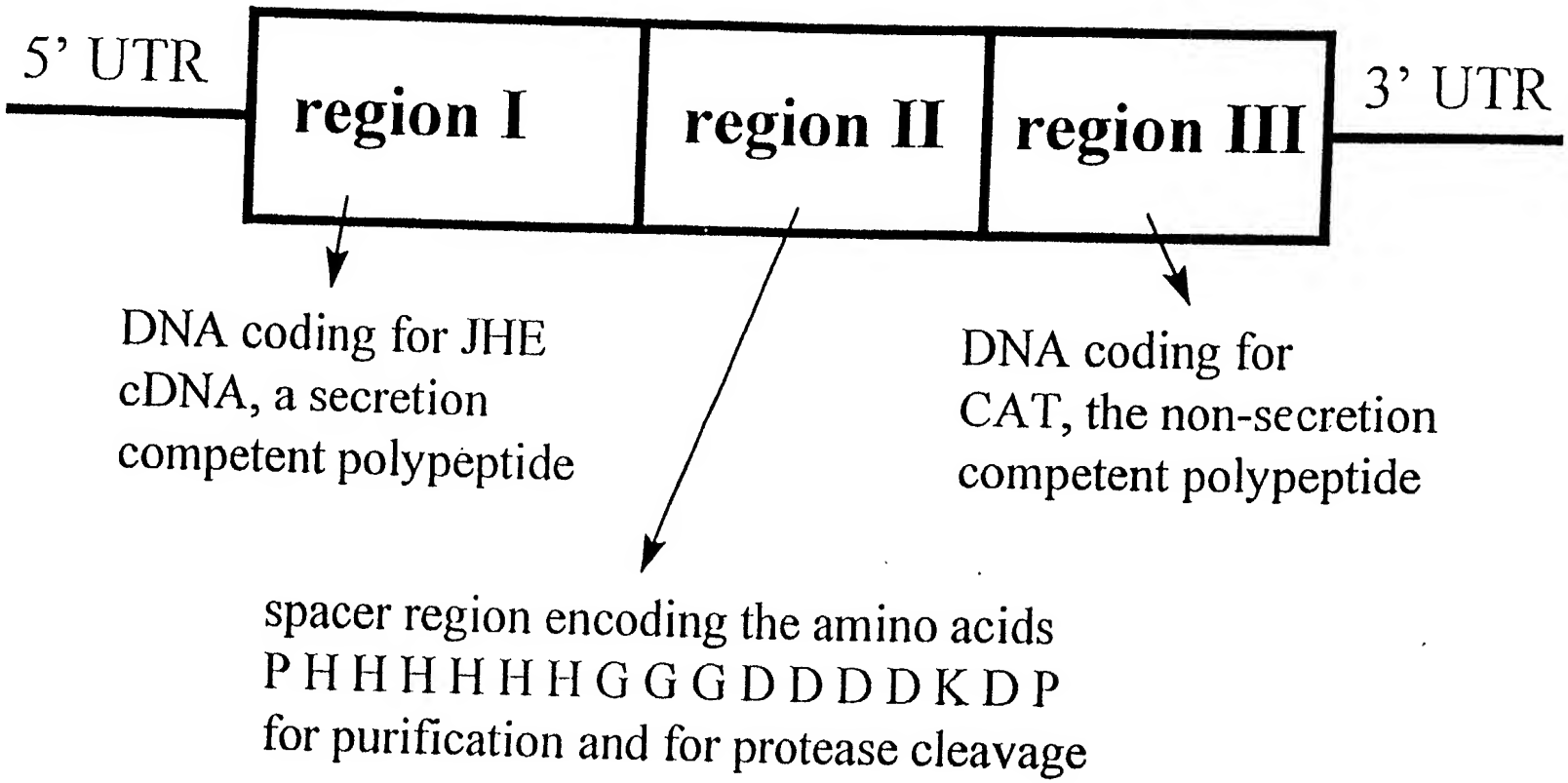


Figure 2a.

APPLN. FILING DATE: HEREWITH
TITLE: SEQUENCES FOR IMPROVING THE EFFICIENCY OF SECRETION OF NON-SECRETED PROTEINS...
INVENTOR(S): IATROU, FARRELL & BEHIE
ATTORNEY DOCKET NO: 028722-274

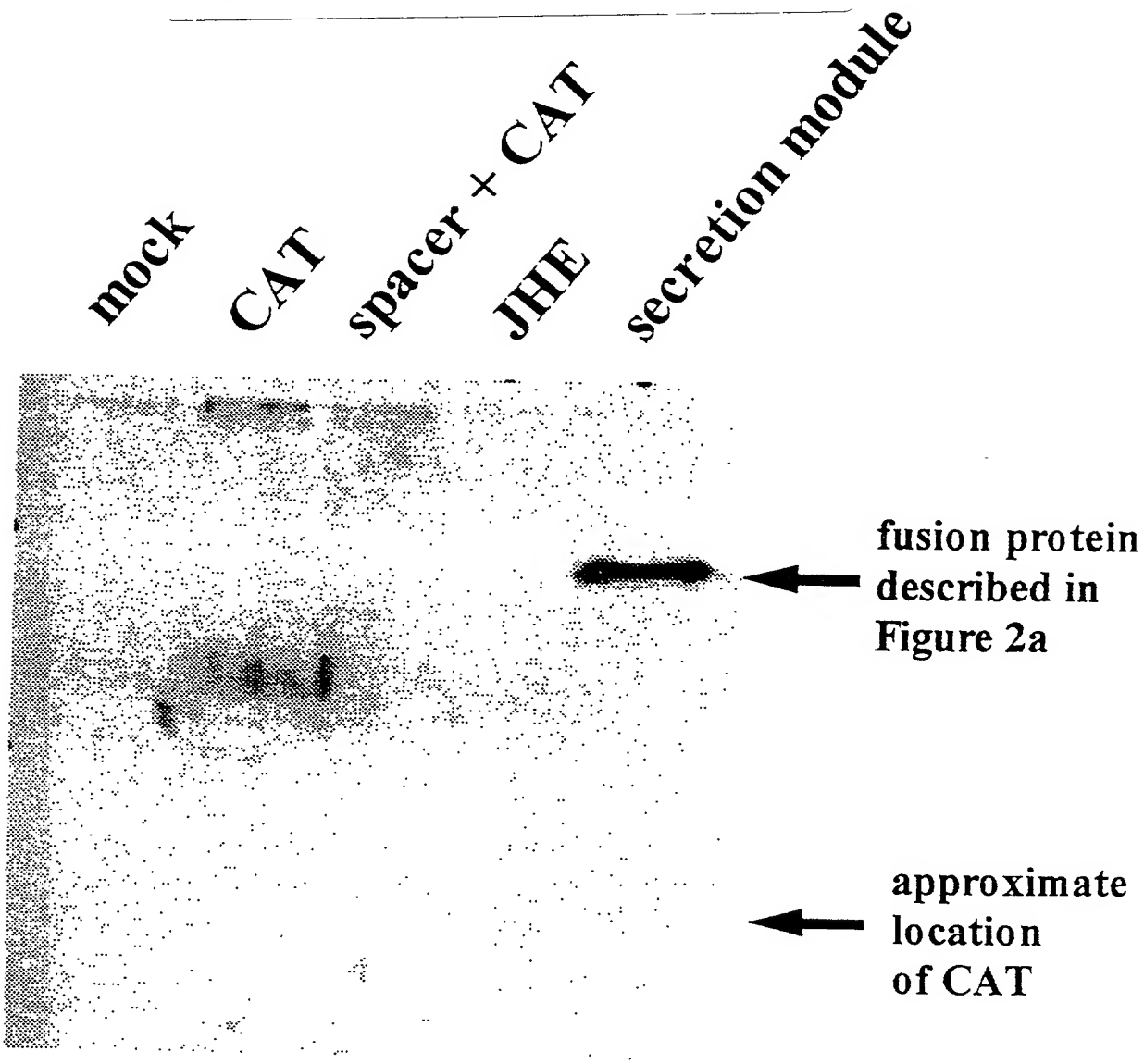

mock
CAT
spacer + CAT
JHE
secretion module
fusion protein described in Figure 2a
approximate location of CAT
0.02 mL of transfection supernatant per lane

Figure 2b

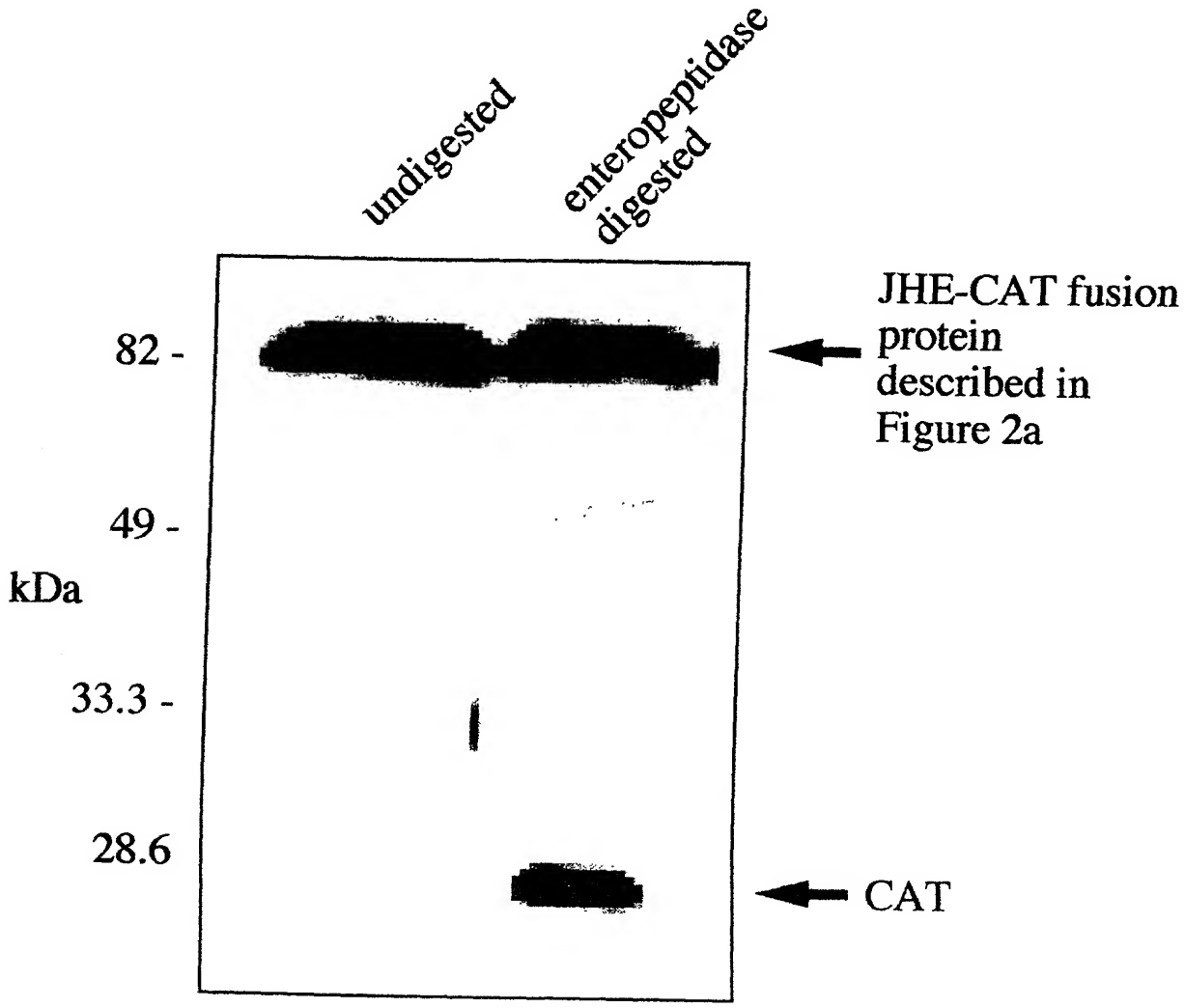


Figure 2c

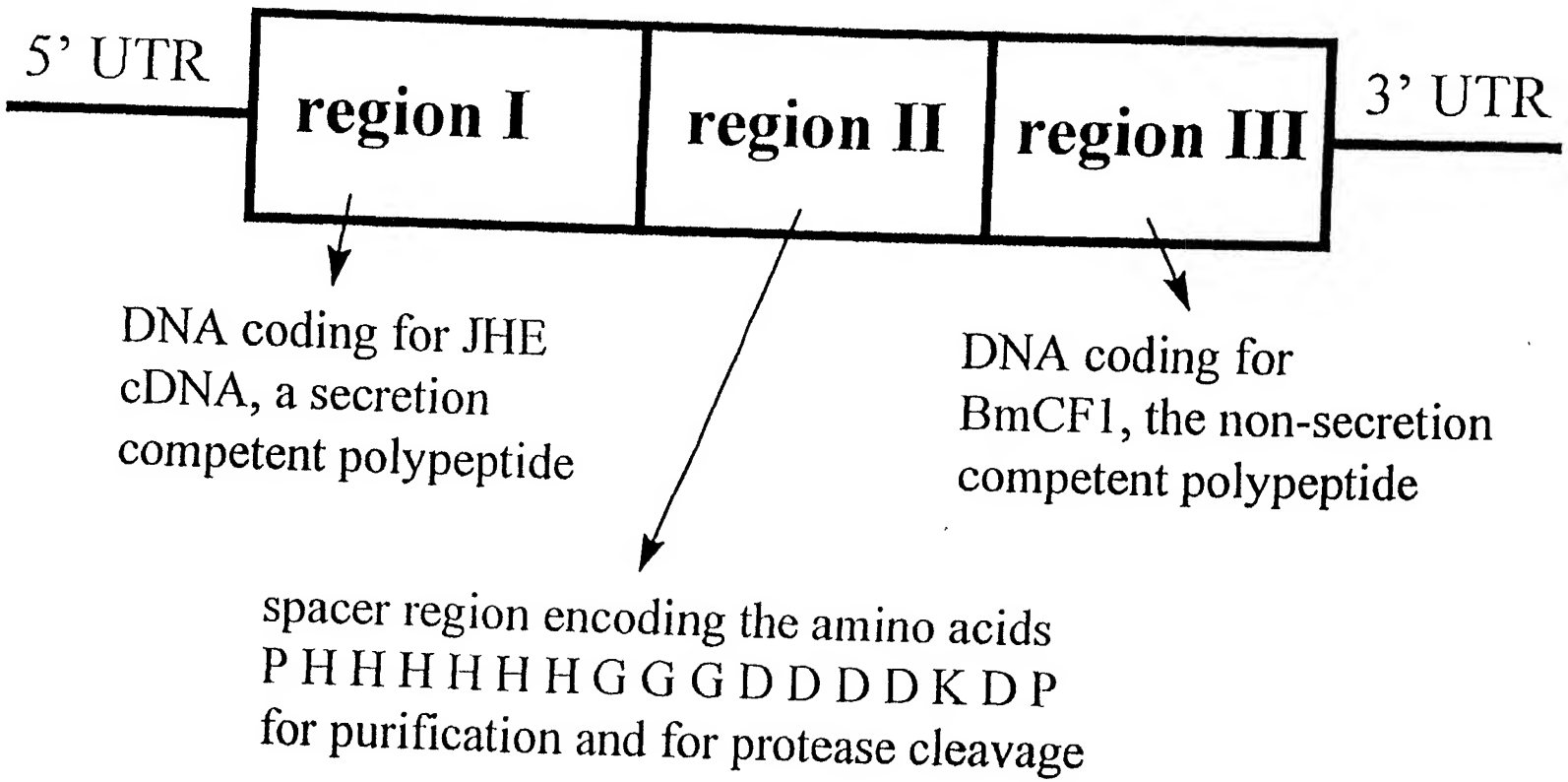


Figure 3a.

APPLN. FILING DATE: HEREWITH
TITLE: SEQUENCES FOR IMPROVING THE EFFICIENCY OF SECRETION OF NON-SECRETED PROTEINS...
INVENTOR(S): IATROU, FARRELL & BEHIE
ATTORNEY DOCKET NO: 028722-274
SHEET 5 of 10

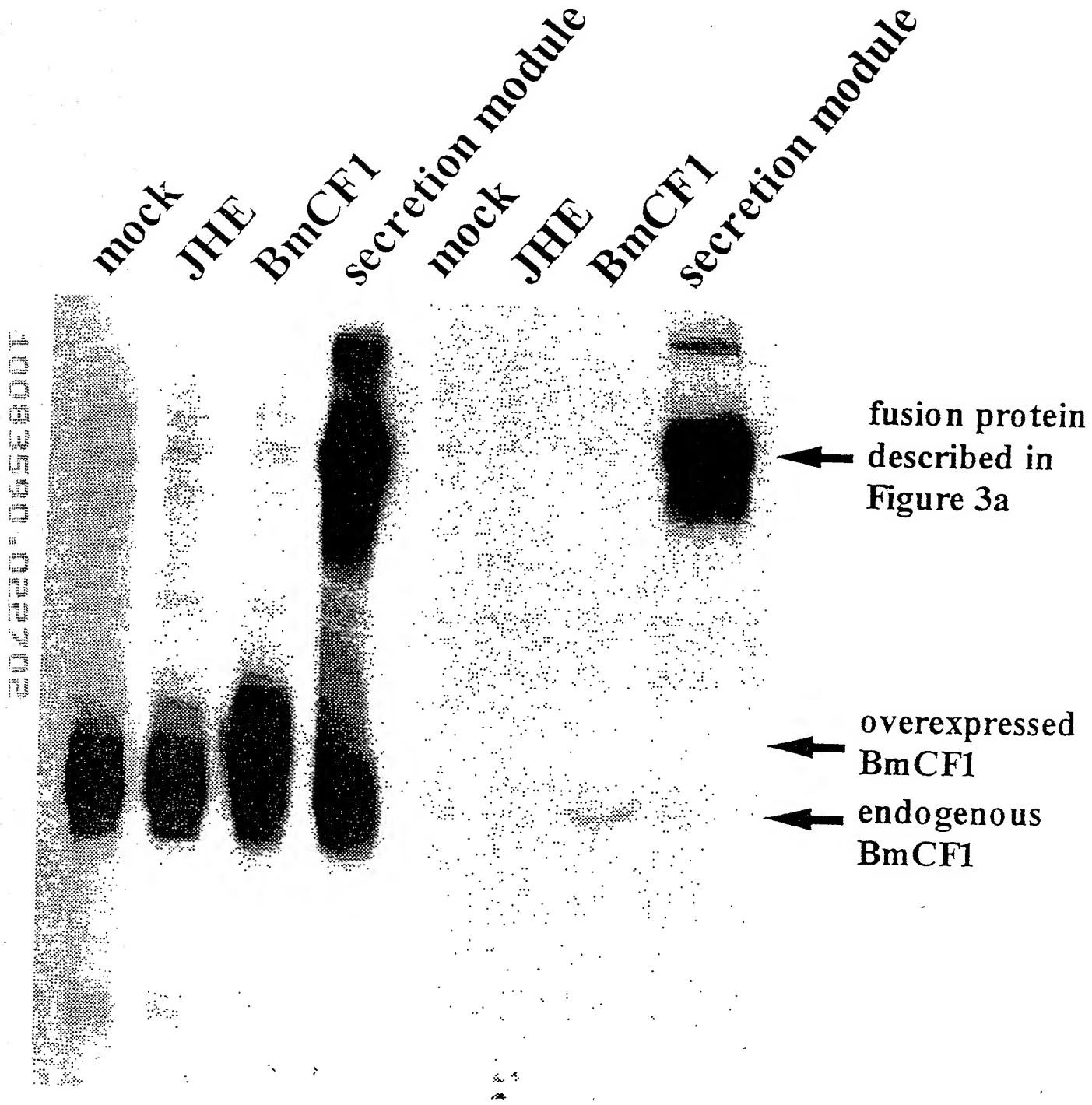

mock
JHE
BmCF1
secretion module
mock
JHE
BmCF1
secretion module
fusion protein described in Figure 3a
overexpressed BmCF1
endogenous BmCF1
50,000 cells per lane
0.02 mL transfection supernatant per lane

Figure 3b

```
19   A TGACTTCACA CGTACTCGCG CTCGCCTTCC
51   TTCTACACGC GTGCACAGCG CTGGCGTGGC AGGAGACAAA TTCGCGCAGC
101  GTGGTCGCCC ATCTGGACTC CGGCATTATA CGCGGCGTGC CGCGCTCAGC
151  GGATGGCATC AAGTTCGCCA GCTTCCTAGG AGTGCCCTAC GCTAAGCAGC
201  CTGTTGGAGA ACTCAGGTTT AAGGAGCTCG AGCCTCTAGA ACCTTGGGAT
251  AATATCCTGA ACGCAACAAA TGAAGGACCC ATCTGCTTCC AAACAGATGT
301  ATTATACGGG AGGCTCATGG CGGCAAGCGA GATGAGCGAG GCTTGCATAT
351  ACGCCAACAT TCATGTTCCA TGGCAAAGCC TTCCCCGAGT GAGGGGGACC
401  ACACCTTTAC GGCCTATCCT GGTGTTCATA CATGGTGGAG GATTTGCTTT
451  CGGCTCCGGC CACGAGGACC TACACGGACC AGAATATTTG GTCACTAAGA
501  ATGTCATCGT CATCACGTTT AATTACAGAT TGAACGTCTT CGGTTTCCTG
551  TCCATGAACA CAACAAAAAT CCCCGGGAAT GCCGGTCTCC GGGATCAGGT
601  AACCCTGTTG CGCTGGGTGC AAAGGAACGC CAAGAATTTC GGAGGAGACC
651  CCAGCGACAT CACCATAGCG GGGCAGAGCG CTGGTGCATC AGCTGCGCAT
701  CTACTGACTC TTTCTAAAGC TACTGAAGGT CTTTTCAAAA GAGCGATTCT
751  GATGAGCGGA ACAGGAATGA GCTACTTCTT TACTACTTCT CCACTTTTCG
801  CGGCCTACAT TTCGAAACAG TTGTTGCAAA TCCTGGGCAA TCAACGAGAC
851  GGATCCGAAG AAATACATCG GCAGCTCATC GACCTACCCG CAGAGAAACT
901  GAACGAGGCT AACGCCGTCC TGATTGAACA AATTGGCCTG ACAACCTTCC
951  TCCCTATTGT GGAATCCCCA CTACCTGGAG TAACAACCAT TATTGACGAT
1001 GATCCAGAAA TCTTAATAGC CGAAGGACGC GGCAAGAATG TTCCACTTTT
1051 AATAGGATTT ACCAGCTCAG AATGCGAGAC TTTCCGCAAT CGACTATTGA
1101 ACTTTGATCT CGTCAAAAAG ATTCAGGACA ATCCTACGAT CATAATACCG
1151 CCTAAACTGT TATTTATGAC TCCACCAGAG CTGTTGATGG AATTAGCAAA
1201 GACTATCGAG AGAAAGTACT ACAACGGTAC AATAAGTATC GATAACTTCG
1251 TAAAATCATG TTCAGATGGC TTCTATGAAT ACCCTGCATT GAAACTGGCG
1301 CAAAAACGTG CCGAAACTGG TGGAGCTCCA CTGTACTTGT ACCGGTTCGC
1351 GTACGAGGGT CAGAACAGCA TCATCAAGAA GGTAATGGGG CTGAACCACG
1401 AGGGTGTCGG CCACATTGAG GACTTAACCT ATGTGTTTAA GGTCAACTCT
1451 ATGTCCGAAG CTCTGCACGC ATCGCCTTCT GAGAATGATG TGAAAATGAA
1501 GAATCTAATG ACGGGCTATT TCTTAAATTT TATAAAGTGC AGTCAACCGA
1551 CATGCGAAGA CAATAACTCA TTGGAGGTGT GGCCGGCTAA CAACGGCATG
1601 CAATACGAGG ACATTGTGTC TCCCACCATC ATCAGATCCA AGGAGTTCGC
1651 CTCCAGACAA CAAGACATTA TCGAGTTCTT CGACAGCTTC ACCAGTAGAA
1701 GCCCGCTTGA
```

Figure 4

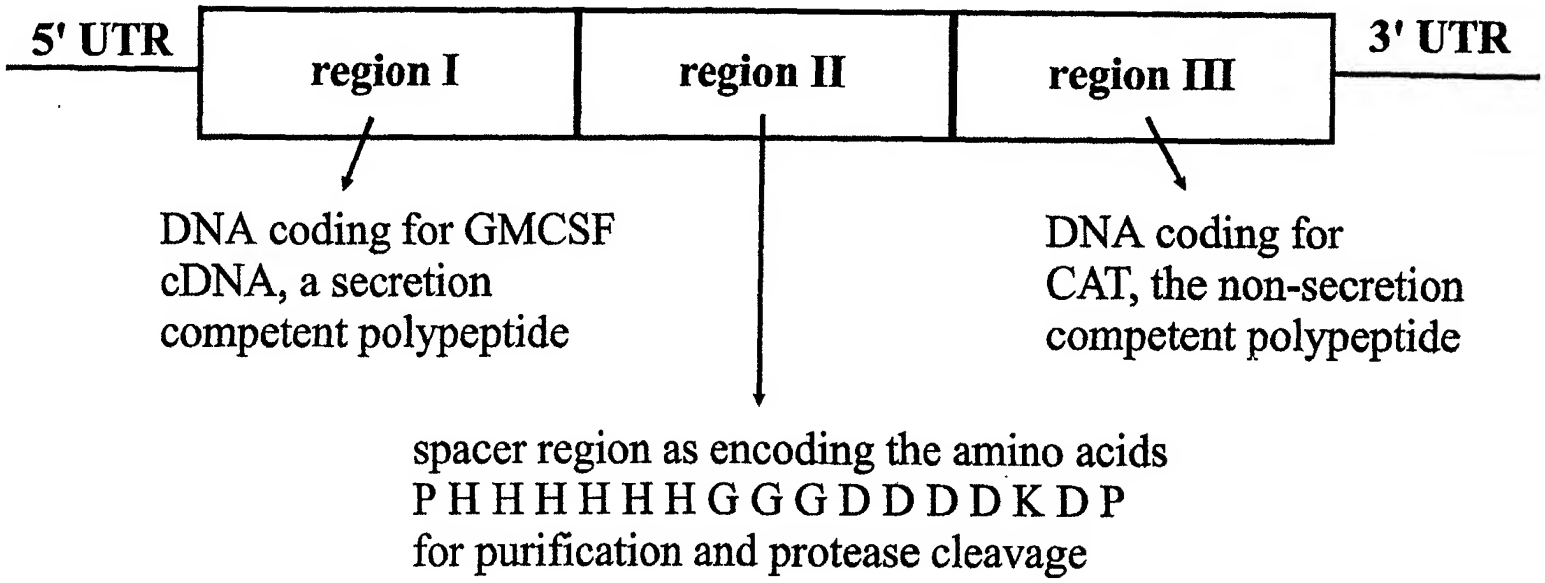
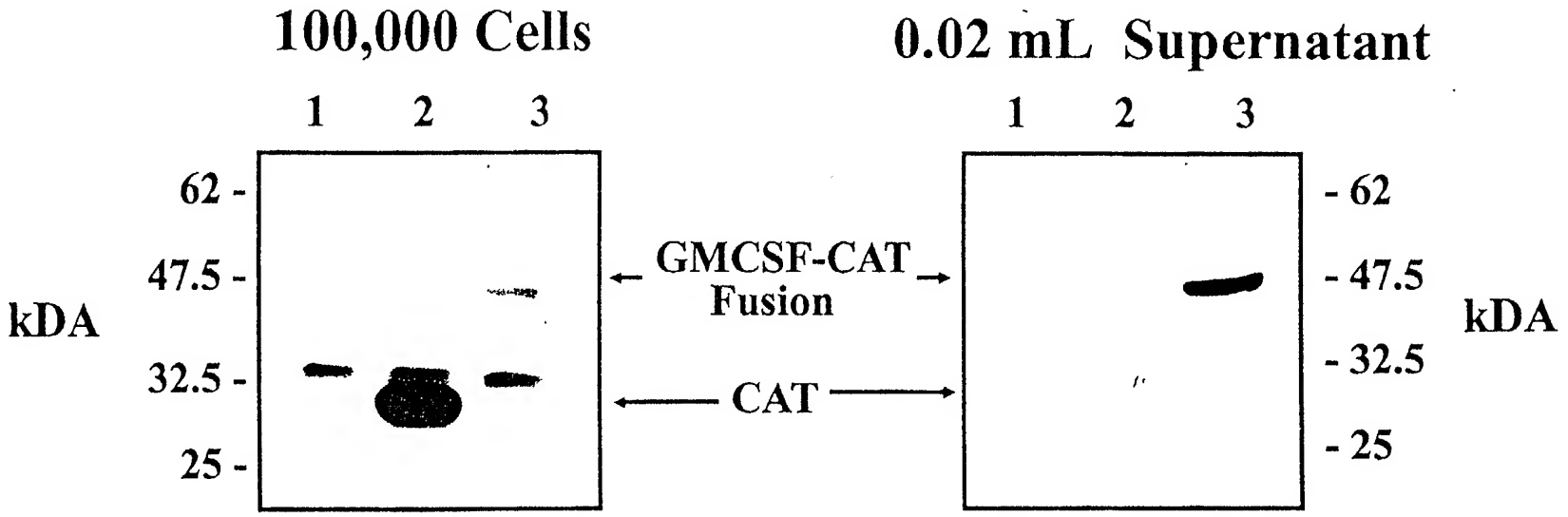


Figure 5.

GMCSF cDNA Sequence

ATGTGGCT GCAGAGCCTG CTGCTCTTGG GCACTGTGGC CTGCAGCATC TCTGCACCCG
CCCGCTCGCC CAGCCCCAGC ACGCAGCCCT GGGAGCATGT GAATGCCATC CAGGAGGCCC
GGCGTCTCCT GAACCTGAGT AGAGACACTG CTGCTGAGAT GAATGAAACA GTAGAAGTCA
TCTCAGAAAT GTTTGACCTC CAGGAGCCGA CCTGCCTACA GACCCGCCTG GAGCTGTACA
AGCAGGGCCT GCGGGGCAGC CTCACCAAGC TCAAGGGCCC CTTGACCATG ATGGCCAGCC
ACTACAAGCA GCACTGCCCT CCAACCCCGG AAACTTCCTG TGCAACCCAG ATTATCACCT
TTGAAAGTTT CAAAGAGAAC CTGAAGGACT TTCTGCTTGT CATCCCCTTT GACTGCTGGG
AGCCAGTCCA GGAG**TGA**

Figure 6



Lanes

1. Control pIE1/153A Transfection
2. pIE1/153A.CAT Transfection
3. pIE1/153A.GMCSF.HisEP.CAT Transfection

Figure 7

APPLN. FILING DATE: HEREWITH
TITLE: SEQUENCES FOR IMPROVING THE EFFICIENCY OF SECRETION OF NON-SECRETED PROTEINS...
INVENTOR(S): IATROU, FARRELL & BEHIE
ATTORNEY DOCKET NO: 028722-274 SHEET 10 of 10